(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau





(43) International Publication Date 31 July 2003 (31.07.2003)

PCT

(10) International Publication Number WO 03/062805 A3

(51) International Patent Classification7:

G01N 23/20

(21) International Application Number: PCT/GB03/00283

(22) International Filing Date: 24 January 2003 (24.01.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0201773.9

25 January 2002 (25.01.2002) GB

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- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

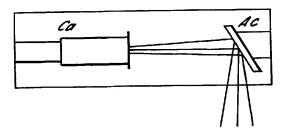
of inventorship (Rule 4.17(iv)) for US only

Published:

- with international search report
- (88) Date of publication of the international search report: 27 November 2003

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: X-RAY DIFFRACTION METHOD



(57) Abstract: An X-ray diffraction method for the analysis of polycrystalline materials, the method comprising:(a) providing a polycrystalline material for analysis; (b) providing a polychromatic X-ray source, wherein the source produces X-rays by accelerating charged particles to energies of no more than 1 MeV; (c) collimating X-rays from the polychromatic X-ray source into a beam having a divergence in the range of from 10⁻⁴ to 10⁻² radians;(d) exposing at least a portion of the polycrystalline material to the collimated X-ray beam, whereby the beam is diffracted;(e) collecting at least some of the diffracted X-rays in an energy dispersive X-ray detector or array; and(f) analysing the collected, diffracted X-rays.



O 03/062805 A3

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 G01N23/20								
According to International Patent Classification (IPC) or to both national classification and IPC								
B. FIELDS SEARCHED								
Minimum do	cumentation searched (classification system followed by classif ${\tt G01N}$	fication symbols)						
	ion searched other than minimum documentation to the extent t							
Electronic da	ata base consulted during the international search (name of dat	a base and, where practical, search terms used)					
EPO-In	ternal, WPI Data, PAJ							
C. DOCUME	ENTS CONSIDERED TO BE RELEVANT							
Category °	Citation of document, with indication, where appropriate, of the	ne relevant passages	Relevant to claim No.					
х	US 6 072 853 A (HALL CHRISTOPH 6 June 2000 (2000-06-06) abstract column 5, line 16 -column 6, l figure 1		1-23					
A	US 5 265 144 A (HARDING GEOFFR AL) 23 November 1993 (1993-11-abstract column 3, line 10 -column 4, l figure 1	1-23						
A	US 5 787 145 A (GEUS GEORG) 28 July 1998 (1998-07-28) abstract column 4, line 1 -column 5, li figures 1,2	ne 6;	1-23					
Furt	ther documents are listed in the continuation of box C.	Patent family members are listed	I in annex.					
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other	means nent published prior to the international filing date but than the priority date claimed	ments, such combination being obvious to a person skilled in the art. "&" document member of the same patent family						
	actual completion of the international search	Date of mailing of the international se	earch report					
	l August 2003	07/08/2003						
Name and	mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Authorized officer Kempf, G						



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PCT/GB	03/00283	

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 6072853	A	06-06-2000	AU DE EP WO	7138196 A 69617715 D1 0852719 A1 9712234 A1	17-04-1997 17-01-2002 15-07-1998 03-04-1997
US 5265144	A	23-11-1993	DE DE EP JP	4101544 A1 59209678 D1 0496454 A1 4317633 A	23-07-1992 27-05-1999 29-07-1992 09-11-1992
US 5787145	Α	28-07-1998	DE GB	19510168 A1 2299251 A ,B	26-09-1996 25-09-1996

Patent Assignment Abstract of Title

Total Assignments: 1

Application #: 10502432 Filing Dt:

Patent #: NONE

Issue Dt:

PCT #: NONE

Publication #: NONE

Pub Dt:

Inventor: Alexander M Korsunsky

Title: X-Ray Diffraction Method

Assignment: 1

Reel/Frame: 015606/0721 Received: 01/19/2005

Recorded:

Mailed:

Pages:

Conveyance: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

01/19/2005

01/26/2005

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Exec Dt: 09/06/2004

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Search Results as of: 8/25/2005 6:53:01 P.M.